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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,089	10/17/2003	Chi-Liang Lo	MR1683-851	9095

4586 7590 09/10/2007

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EXAMINER	
HUNG, STEPHEN C	

ART UNIT	PAPER NUMBER
2615	

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09/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/687,089	LO, CHI-LIANG	
	Examiner	Art Unit	
	Stephen C. Hung	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1-2** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Beckert et al. (5,794,164)** in view of **Shu et al. (US 7,007,118 B2)**.

Consider **claim 1**, Beckert teaches a digital audio assembly (Figure 1) comprising:

a digital signal processor (Figure 5, DSP 80) mounted in the digital audio assembly (Figure 1);

a digital analog converter (Figure 7, A/D, D/A 432) mounted in the digital audio assembly (Figure 1) and connected to the DSP (Figure 7, D/A 432 is connected to FPGA 410 which is connected to I/F 428 which is connected to Figure 4, I/F 204 which is connected to driver 78 which is connected to sound control 210 which is connected to I/F 206 which is connected to Figure 5, I/F 310 which is connected to FPGA 306 which is connected to DSP 80);

a base member (Figure 1, base unit 46) including a front panel ("front of the base unit 46," column 4, lines 44-45) and a rear panel opposite (Figure 1, back of the base unit 46 in which Antenna 34, speakers 30, Diagnostic Interface 28, Security Sensors 26, and monitor 24 are connected to) to the front panel;

a secure digital memory card (SD card) socket (Figure 1, PC card sockets 44) mounted in the front panel ("front of the base unit 46," column 4, lines 44-45) and electrically connected to the DSP (Figure 5, DSP 80), the SD card socket adapted to receive a SD card ("A dual PC card socket 44 is provided to support 2-type II or 1-type III PC cards. Such cards might be configured as extra memory," column 9, lines 38-40) whereby the digital audio assembly (Figure 1) is operable to read and play the digital signals that are saved in the SD card;

a liquid crystal display (Figure 5, display 54 and "the display 54 is preferably a back lit LCD," column 4, lines 57-58) mounted in the front panel ("front of the base unit 46," column 4, lines 44-45) and electrically connected to the DSP (Figure 5, DSP 80);

multiple functional switches (Figure 1, keypad 52) respectively mounted in the front panel ("front of the base unit 46," column 4, lines 44-45) and electrically connected to the DSP (Figure 5, DSP 80) for user control of the digital audio assembly (Figure 1);

a sound-source ("external tape drive, portable tape player or some other external sound sources," column 6, lines 34-35) input port (Figure 4, AUX Stereo Input Jack 218) mounted in the front panel ("front of the base unit 46," column 4, lines 44-45) and electrically connected to the DAC (Figure 7, D/A 432) for conversion between digital and analog representations of sound signals transmitted thereby; and

a sound-effect ("an alarm," column 10, line 61) input/output port (Figure 7, analog I/O) mounted in the rear panel ("security sensors 26 are connected to analog inputs 430," column 10, lines 59-60) and electrically connected to the DAC (Figure 7, D/A 432) for conversion between digital and analog representations of sound signals transmitted thereby.

a socket (Figure 1, floppy disk drive 40) mounted in the front panel ("front of the base unit 46," column 4, lines 44-45) and electrically connected to the DSP (Figure 5, DSP 80), the socket (Figure 1, floppy disk drive 40) adapted to be connected to extra media ("floppy diskette," column 3, line 27) and the digital audio assembly (Figure 1) reading digital signals in the extra media ("retrieve data or programs from the storage device . . . floppy diskette," column 3, lines 25-26);

However, Beckert does not explicitly teach that the socket is a USB socket.

In the same field of endeavor, Shu teaches a universal serial bus socket ("USB communication port," column 3, lines 43-46 and Figure 1, USB communication port 153) mounted in the front panel (Figure 1, control panel 14) and electrically connected to the DSP (Figure 2, CPU 21), the USB socket (Figure 1, USB communication port 153) adapted to be connected to extra media and the digital audio assembly (Figure 1) reading the digital signals in the extra media via the USB connection;

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the floppy disk drive of Beckert with the USB port of Shu. Patent Application Publication (US 2003/0028629 A1) provides the motivation for doing this, stating that "floppy disks, however, are rapidly becoming obsolete" (Amro, paragraph [0002]).

In addition, it is well known in the art that a USB port accepts a USB flash drive, which contains a more significant amount of memory than a floppy diskette for storing data. USB flash drives are designed to be more slim, compact, and portable than floppy diskettes, as well as being more damage-proof.

Consider **claim 2**, the modified device of Beckert teaches the digital audio assembly (Beckert, Figure 1) as claimed in claim 1 further comprising an interface port (Beckert, Figure 8, network connection port 510) electrically connected to the DSP (Beckert, Figure 5, DSP 80) and adapted to be electrically connected to a PC (Beckert, Figure 8,

client 512) for user control of the digital audio assembly via the PC (Beckert, "client computing units 512 can request certain entertainment from the server computing unit 504," column 13, lines 14-15), thereby the digital audio assembly (Beckert, Figure 1) reads the digital signals from the extra media via the USB connection (Shu, Figure 1, USB communication port 153) and transmits the digital signals from the extra media to the PC via the interface port for storage of the digital signals therein (Beckert, "the client processing unit 512 can receive data and programs from the central storage device 506 via server computing unit 504," column 12, line 67 to column 13, line 2).

Response to Arguments

3. Applicant's arguments filed on 6/13/2007 have been fully considered but they are not persuasive.

On page 7 lines 9-13 of the remarks/arguments, applicant states that "Clearly, Beckhert, et al. contemplates the compatibility of these local processors with one another; however, the required modularity just as clearly precludes any common 'connect[ion]' to the given 'DSP ... mounted in the digital audio assembly' of such features as a digital analog converter."

The applicant assumes that because there are three separate modules, the faceplate, support, and computer module, that there is no connection between the DSP and the digital analog converter. However, these three separate modules can be connected together. Beckert et al. states that "The internal bus 68 has a first interfacing

slot 70 and a second interfacing slot 72 which provide shared access to the bus from the faceplate module 60 and the computer module 64" (column 5, lines 64-67).

Although the DSP and digital analog converter are not *directly* connected, they are still electrically connected together. The digital analog converter (Figure 7, D/A 432) is connected to the FPGA (410) which is connected to the I/F (428) which is connected to another I/F (Figure 4, I/F 204) which is connected to a driver (78) which is connected to the sound control (210) which is connected to an I/F (206) which is connected to another I/F (Figure 5, I/F 310) which is connected to a FPGA (306) which is connected to the DSP (80).

Furthermore, on page 7, line 19 to page 8, line 3, the applicant states that "Beckert, et al. discloses the use of a digital analog converter, therefore, it clearly is neither to be 'connected to the DSP' mounted and shared in the digital audio assembly, nor used 'for conversion between digital and analog representations' actually 'of sound signals transmitted' by 'a sound-source input' or 'sound-effect input/output port' provided."

However, it is well known in the art that a digital analog converter is used to convert a digital signal into an analog signal. Thus, the digital analog converter of Beckert is capable of conversion between digital and analog representations of sound signals transmitted by a sound-source input.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Beckert et al. (US 2001/0001319 A1) teaches a vehicle computer system with open platform architecture.

Qureshey et al. (US 2002/0002039 A1) teaches a network enabled audio device.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen C. Hung whose telephone number is (571)270-

1457. The examiner can normally be reached on M-Th 7:30am-5pm, Every other Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S.H.

SINH TRAN
SUPERVISORY PATENT EXAMINER